

PATENT SPECIFICATION



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328,370

Complete Accepted: May 1, 1930.

COMPLETE SPECIFICATION.

Improvements in Lawn Mowers.

We, WENMUR BLADES LIMITED, a Company duly organized and existing under the Laws of the Dominion of New Zealand, of Hamilton, in the Dominion of New Zealand, Manufacturers, and DOUGLAS WENHAM, of 35, Albert Street, Hamilton, New Zealand, a subject of the King of Great Britain, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to lawn mowers and has for its object to provide improvements in the ordinary type of lawn mower having a removable flexible fixed knife and a transverse knife carrying bar extending between side frame members and pivotally hung to tip on such members.

The invention consists in constructing a blade holder bar extending along the transverse bar referred to in two parts firmly attached one above the other by rivetting or similar means so as to form between them a groove into which the rear edge of the knife is engaged, the lower member projecting forwardly of the upper one and being preferably provided with an upwardly turned flange and an overhanging lug adapted to prevent the blade from curving upward.

In fully describing the invention, reference will be made to the accompanying drawings, in which:—

Figure 1 is a cross section through a lawn mower showing the general arrangement of the parts of the machine with which this invention is concerned and looking to one end thereof.

Figure 2 is a similar view but looking to the other end of the machine.

Figure 3 is an end elevation of the knife carrier and knife mounted thereon.

Figure 4 is a cross sectional elevation thereof.

Figure 5 is a plan of one end of the knife carrier and knife.

Figure 6 is a front elevation thereof.

The invention is concerned with the known construction of mower in which the knife blade is screwed, or otherwise secured, to a carrier bar A extending

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across between the side members B of the mower frame, and such carrier bar is attached to or formed in one with bracket members C—C at its ends, each of which brackets is mounted upon the adjacent frame side member by a trunnion pin D that allows of the carrier being tilted to cause the knife blade to be adjusted in relation to the rotating cutter knives.

As shown in Figures 1 and 2, the adjustment of the bar A is effected by means of a hand screw F passing through a lug E, and bearing upon a rear extension c of one of the brackets C, such screw F being arranged to act against a spring G arranged between a forward lug E¹ on the frame member B and a forward extension c¹ of the other bracket C, such spring being maintained in place by a set screw G¹ passing down through said lug. The movements of the brackets C may further be limited by a set screw x passing through a lug E² on the frame member B and engaging a forward extension c² of one of the brackets C.

The knife is formed by a thin strip H of flexible steel and this is held upon the carrier bar by having its inner edge gripped within a holder bar attached to the said carrier bar so that the outer edge of the knife projects forwardly and is engaged by the rotating knives in the usual way. The carrier bar is set so that the knife is engaged by the rotating cutter knives with a close springy engagement and a resiliency in its action that will ensure of an effective cut being obtained and will also always maintain a sharp cutting edge.

The said holder bar is so formed as to provide for the back edge of the knife strip being gripped and for it being removed and replaced at will. This is given effect to by making the bar of two parts, a lower plate J that is affixed by screwing or otherwise, to the bottom of the carrier bar and has its forward edge projecting a distance forwardly of this bar, and an upper strip K that is secured to extend along the top surface of the plate J, as by being rivetted thereto. This strip K is made of less width than the plate J and is so shaped at its for-

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ward portion as to form with the plate, the slot or groove M extending along the full length of the bar and into which the knife back edge is fitted and gripped so that its forward edge overhangs the plate J in the manner before described.

The forward top edge of the plate J is preferably made with a slight ridge j so that the knife H is given an upward set at its front edge that will increase its springiness in contact with the rotating cutter of the machine. The knife is maintained from curving upward by means of an overhanging lug N formed on one end of the plate J and beneath which that end of the knife passes. This lug is formed on the end with which the rotating cutter knives first engage in their operation.

In some cases the holder bar itself may be given a resilient cushioning effect in its relation to the cutter knives, by inserting between the rear edge of the plate J and the carrier bar, a strip of resilient material such as rubber.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. A lawn mower having a removable flexible fixed knife and a transverse knife carrying bar extending between side frame members and pivotally hung to tip on such members, characterised by a blade holder bar extending along said transverse bar and constructed in two parts firmly attached one above the other by rivetting or similar means and formed to provide a groove into which the rear edge of the knife is engaged, the lower member projecting forwardly of the upper one substantially as described.

2. In a lawn mower according to claim 1 constructing the lower member of said blade holder bar with an upwardly turned flange and an overhanging lug adapted to prevent the blade from curving upward.

3. An improved blade holder bar for the fixed blade of lawn mowers constructed and arranged substantially as described with reference to the accompanying drawings.

Dated this 25th day of February, 1929.

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FIG. 1

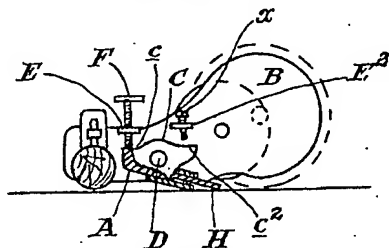


FIG. 2

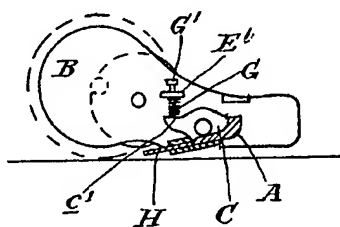


FIG. 3

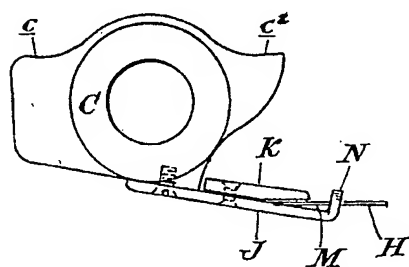


FIG. 4

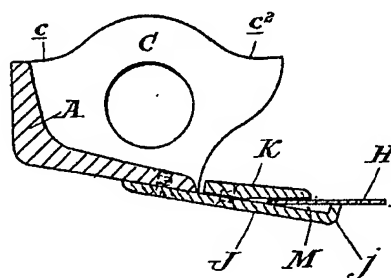


FIG. 5

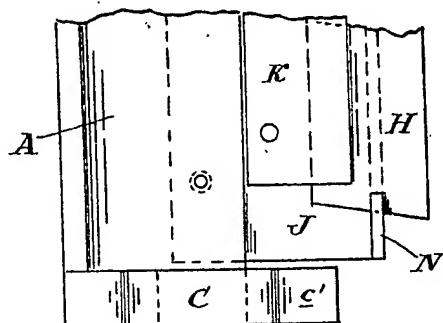
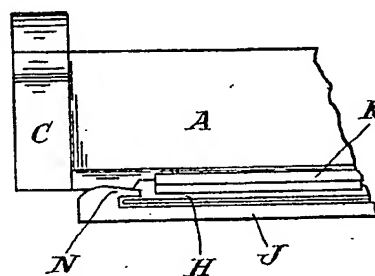


FIG. 6



[This Drawing is a reproduction of the Original on a reduced scale.]

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